PERMIT AMENDMENT NO. 4953-289-0011-V-04-2
ISSUANCE DATE: 05/31/2022

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name: **Wolf Creek Landfill**

Facility Address: **911 Landfill Road**
Dry Branch, Georgia 31020, Twiggs County

Mailing Address: **911 Landfill Road**
Dry Branch, Georgia 31020

Parent/Holding Company: **Waste Management of Georgia, Inc.**

Facility AIRS Number: **04-13-289-00011**

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

Expansion of the landfill disposal area by an additional 13,285,000 cubic yards.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Amendment and Permit No. **4953-289-0011-V-04-0**. Unless modified or revoked, this Amendment expires upon issuance of the next Part 70 Permit for this source. This Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in App No. **642635** dated **March 14, 2022**; any other applications upon which this Amendment or Permit No. **4953-289-0011-V-04-0** are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **10** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

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Richard E. Dunn, Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Wolf Creek Landfill is increasing its disposal capacity through the addition of approximately 104 acres for future disposal. This addition will result in an increase of 13,285,000 cubic yards of disposal capacity. This expansion is considered a modification; therefore, the facility is subject to applicable provisions of 40 CFR 60 Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014. In accordance with the changes to NSPS WWW, this site is no longer subject to NSPS WWW since NSPS WWW is no longer applicable since it has been replaced with Federal Plan OOO and NSPS XXX. The site should comply with NSPS XXX and the new NESHAP AAAA that was effective on September 27th, 2021.

Within 90 days after the start of constructing the expansion, the Landfill will be required to submit an NSPS Subpart XXX Initial Design Capacity and NMOC report. Expansion of the disposal area does not change rule applicability, does not constitute a Title I modification, and does not exceed the allowable emission rate. Currently, the landfill already exceeds 2.5 million Mg, therefore, submitting permit application is the only required action.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.2 Facility Wide Federal Rule Standards

MODIFIED CONDITION

2.2.1 The Permittee shall comply with all applicable provision of 40 CFR 60 Subpart A, "General Provisions," and 40 CFR 60 Subpart XXX, "Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014," for the operations of Landfill 0001.
[40 CFR 60 Subpart XXX]

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.2 Modified Emission Units

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	**Description**		**ID No.**	**Description**
0001	Landfill	40 CFR 60, Subpart A 40 CFR 60, Subpart XXX 40 CFR 62, Subpart OOO**** 40 CFR 61, Subpart A** 40 CFR 61, Subpart M** 40 CFR 63, Subpart A*** 40 CFR 63, Subpart AAAA*** 391-3-1-.02(2)(n)	CD01 CD02	2,000 scfm open flare and gas collection and control system 3,000 scfm open flare and gas collection and control system

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards Are intended as a compliance tool and may not be definitive.

** 40 CFR 61 requirements are potentially applicable, if the facility accepted asbestos containing industrial waste.

*** 40 CFR 63 requirements are not currently applicable but could become applicable during the permit term if the facility is required to install a GCCS or becomes a bioreactor.

****Site is subject to Federal Plan OOO prior to it commencing the modification that triggers NSPS XXX.

3.3 Equipment Federal Rule Standards

3.3.2 [deleted]

PART 4.0 REQUIREMENTS FOR TESTING

4.2 Specific Testing Requirements

MODIFIED CONDITIONS

4.2.1 The Permittee shall determine the NMOC emission rate using the appropriate equation in Condition 4.2.2 and values for the methane generation constant (k), the methane generation potential (L_o), and the NMOC concentration (C_{NMOC}) for the appropriate Tier, as listed in Condition 4.2.3.
[40 CFR 60.764(a)]

4.2.2 The appropriate equation below shall be used to calculate the NMOC emission rate.
[40 CFR 60.764(a)(1)]

a. If the actual year-to-year solid waste acceptance rate is known, the Permittee shall use:

$$M_{NMOC} = \sum_{i=1}^{n} 2kL_O M_i (e^{-kt_i})(C_{NMOC})(3.6x10^{-9})$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill (megagrams per year)
K = Methane generation rate constant ($year^{-1}$)
Lo = Methane generation potential (cubic meters per megagram solid waste)
C_{NMOC} = NMOC concentration (ppm as hexane)
M_i = Mass of solid waste deposited in the ith section (megagrams)
t_i = Age of solid waste from the ith section (years)
n = Number of sections

b. If the actual year-to-year solid waste acceptance rate is unknown, the Permittee shall use:

$$M_{NMOC} = 2L_o R(e^{-kc} - e^{-kt})(C_{NMOC})(3.6x10^{-9})$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill (megagrams per year)
K = Methane generation rate constant ($year^{-1}$)
L_o = Methane generation potential (cubic meters per megagram solid waste)
C_{NMOC} = NMOC concentration (ppm as hexane)
R = Average annual acceptance rate (megagrams per year)
T = Age of landfill (years)
C = time since closure (years). For an active landfill, c=0 and $e^{-kc} = 1$

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i or R, if documentation of the nature and amount of such waste has been maintained.

4.2.3 The Permittee shall use the values for the methane generation constant (k), the methane generation potential (L_o), and the NMOC concentration (C_{NMOC}) determined, using the procedure below for the appropriate Tier, when calculating NMOC emission rates, as per the appropriate equation in Condition 4.2.2.
[40 CFR 60.764(a)]

a. **Tier 2**. The Permittee shall use the following values for the variables in the appropriate equation in Condition 4.2.2 if Tier 2 is to be used to calculate the NMOC emission rate.

i. k = 0.05 per year
ii. L_o = 170 cubic meters per megagram solid waste
iii. C_{NMOC} = 269; this is the site-specific NMOC concentration, in parts per million by volume as hexane, most recently determined by the Permittee. This concentration shall be used until a new site-specific concentration is determined, using either Method 25C or 18 and the sampling procedures in Condition 4.2.4. The Permittee must re-determine the NMOC concentration every five years.

b. **Tier 3**. The Permittee shall use the following values for the variables in the appropriate equation in Condition 4.2.2 if Tier 3 is to be used to calculate the NMOC emission rate.

i. L_o as specified in Tier 2.
ii. C_{NMOC} as determined in Tier 2.
iii. The methane generation rate constant (k) determined using Method 2E. The methane generation rate constant is only determined once. The value for k obtained is used for all future NMOC emission rate determinations.

4.2.4 When determining the NMOC emission rate using Tier 2 or Tier 3 values, the Permittee shall use the following sampling procedures for collecting samples to determine the NMOC concentration (C_{NMOC}).

The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least two years. If the landfill is larger than 25 hectares, only 50 sample probes are required. The sample probes shall be located to avoid known areas of nondegradable solid waste. One sample shall be collected and analyzed from each probe. If composite sampling is done, equal volumes shall be taken from each sample probe. If more than the required numbers of samples are collected, then all samples shall be analyzed. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes, provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For such systems a minimum of three samples must be collected from the header pipe.
[40 CFR 60.764(a)(3)]

4.2.5 The Permittee shall conduct Tier 2 testing to determine the site-specific NMOC concentration using the procedures specified in Condition 4.2.4 or accept applicability of the requirement to install a mandatory GCCS. Subsequent testing shall be performed no later than 60 months from the date of the previous testing if the facility is still required to calculate annual NMOC emission rates in accordance with Condition 4.2.3. The Permittee shall submit a test plan to the Division no less than 30 days prior to the start of the testing described above.
[40 CFR 60.764(a)(3)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.2 Specific Record Keeping and Reporting Requirements

MODIFIED CONDITIONS

6.2.1 Except as provided in Condition 6.2.4, the Permittee shall calculate the NMOC emission rate annually according to the procedure specified in 40 CFR 60.764, "Test Methods and Procedures", which is found in Conditions No. 4.2.1 through 4.2.5, per Tier 2, and submit a NMOC emission rate report to the Division by February 28 of each calendar year. The NMOC emission rate report shall contain all data, calculations, and measurements used to estimate the NMOC emission rate.

If that calculation shows that the NMOC emission rate equals or exceeds 34 megagrams per year, the Permittee is required to install a GCCS.

Alternatively, the Permittee may choose to recalculate the NMOC emission rate in accordance with the following provisions, per the procedures specified in Condition 4.2.2: [40 CFR 60.764(a)(3) and 40 CFR 60.767(b)]

a. If the Tier 2 NMOC emission rate equals or exceeds 34 megagrams per year, the Permittee may recalculate the NMOC emission rate per Tier 3, using the site-specific methane generation rate constant (k). If this calculation shows that the NMOC emission rate is less than 34 megagrams per year, then a GCCS need not be installed at this time; future calculations of the NMOC emission rate shall be done per Tier 3. If the Tier 3 emission rate equals or exceeds 34 megagrams per year, the Permittee shall install a GCCS.

   If recalculating NMOCs per Tier 3 has been chosen, the Permittee shall submit an NMOC emission rate report, with the site-specific methane generation rate constant (k), within one year of the original emission rate calculation that showed the NMOC emission rate to be greater than or equal to 34 megagrams per year. The report shall contain all data, calculations, and measurements used to estimate the NMOC emission rate.

6.2.2 If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k) and the resulting NMOC emission rate is less than 34 megagrams per year, annual reporting shall be resumed. The revised NMOC emission rate report, based upon the resulting site-specific generation rate constant, shall be submitted to the Division within one year after the calculated emission rate first exceeded 34 megagrams per year. The NMOC emission rate report shall contain all data, calculations, and measurements used to estimate the NMOC emission rate.
[40 CFR 60.767(c)(2)]

6.2.3 If the most recent NMOC emission rate report submitted in compliance with Condition 6.2.1 is greater than or equal to 34 megagrams per year, and the Permittee has not chosen (or is unable) to comply with Subpart XXX using a higher Tier calculation method, the Permittee must install a GCCS, according to the following requirements.

a. The Permittee shall submit a GCCS Design Plan to the Division, for approval, within one year of the NMOC calculation that showed NMOCs exceeded 34 Mg/yr.

b. The design plan shall be prepared by a Professional Engineer and be designed to meet the criteria in 40 CFR 60 Subpart XXX – "Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014."

c. The Permittee is required to install and make operational this GCCS, within 30 months after the first annual report in which the emission rate equals or exceeds 34 Mg/yr.

d. The GCCS need only be used to control landfill gas from each area, cell, or group of cells in the landfill, in which the initial solid waste has been placed for a period of 5 years or more, if active, or 2 years or more, if closed or at final grade.

(All entities who practice or offer to practice as a Professional Engineer in the State of Georgia must file an application with the board and receive a Certificate of Authorization prior to practicing. Please refer to O.C.G.A. 43-15-23. An application may be downloaded from the Secretary of State's site or obtained by mail by calling (478-207-2440)
[40 CFR 60.762(b)(2)(i), 60.767(c), and 60.769]

6.2.4 The Permittee is exempt from the requirement to submit an annual NMOC emission rate report after a GCCS meeting the design criteria of 40 CFR 60 Subpart XXX has been installed, during such time as the GCCS is in operation and in compliance with the applicable Subpart XXX requirements.
[40 CFR 60.767(b)(3)]

6.2.5 The Permittee shall keep for at least 5 years up-to-date, readily accessible, on-site records of the maximum design capacity of the landfill, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.
[40 CFR 60.768(a)]

6.2.7 In order to be authorized to exclude an area of deposited asbestos or other nondegradable waste from being part of a required 40 CFR 60 Subpart XXX GCCS (now or in future), the Permittee shall keep, for the life of the collection system, up-to-date and accessible, documentation of the nature, date of deposition, amount, and location of this waste.
[40 CFR 60.768(d)(2)]

6.2.8 In order to be authorized to exclude any nonproductive area of the landfill from being part of a required 40 CFR 60 Subpart XXX GCCS (now or in the future), the Permittee shall keep, and have accessible, documentation of the calculations demonstrating that the total of all excluded areas contribute less than 1 percent of the total NMOC emissions from the landfill.
[40 CFR 60.769(a)(3)(ii) and (iii)]

6.2.15 The Permittee, at the time of preparing to permanently close the landfill, shall submit a closure report to the Division within 30 days of waste acceptance cessation.
[40 CFR 60.767(d)]

Attachments

A. List of Standard Abbreviations and List of Permit Specific Abbreviations
B. Insignificant Activities Checklist, Insignificant Activities Based on Emission Levels and Generic Emission Groups
C. List of References

ATTACHMENT A

List Of Standard Abbreviations

AIRS	Aerometric Information Retrieval System
APCD	Air Pollution Control Device
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments
CEMS	Continuous Emission Monitoring System
CERMS	Continuous Emission Rate Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System(s)
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring Stystem
dscf/dscm	Dry Standard Cubic Foot / Dry Standard Cubic Meter
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
gr	Grain(s)
GPM (gpm)	Gallons per minute
H_2O (H2O)	Water
HAP	Hazardous Air Pollutant
HCFC	Hydro-chloro-fluorocarbon
MACT	Maximum Achievable Control Technology
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per hour
MVAC	Motor Vehicle Air Conditioner
MW	Megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x (NOx)	Nitrogen Oxides
NSPS	New Source Performance Standards
OCGA	Official Code of Georgia Annotated

PM	Particulate Matter
PM_{10} (PM10)	Particulate Matter less than 10 micrometers in diameter
PPM (ppm)	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2 (SO2)	Sulfur Dioxide
USC	United States Code
VE	Visible Emissions
VOC	Volatile Organic Compound

List of Permit Specific Abbreviations

NMOC	Non-methane Organic Compounds
GCCS	Gas collection and control system